sewersystem_pc

Location: infrastructure\sewersystem_pc

Description
Sanitary sewer distribution system in the City of Panama City service area **as of April 2009**, represented by 8 feature classes of which 6 are point features and 2 are line features. The system is designed in a feature dataset within a geodatabase for utility department use and later feature classes exported to a shapefile for other staff use. Point features include control valves (sControlValve), Fittings (sFitting), Liftstations (sLiftstation), manholes (sManholes), meters (sMeters), and outfalls (sOutfall). Line features include gravity mains (sGravityMain) and force mains(sForceMains). This data is used in the city's custom utility software, Cityworks. There are a number of required fields that were included in the system's attribute fields for use in Cityworks and some can only be filled when using that software.

Coordinate system: State Plane, Florida North FIPS 0903, Datum NAD83, US survey feet and all invert elevations are based on NAVD 1988 vertical Datum.

Source
This data was **created and is maintained by Panama City GIS staff** in geodatabase format using ArcGIS software. The initial data in the system was converted from existing AutoCAD digital drawings and as-builts, re-projected and prepared for Cityworks. Additional features were mapped from draft forms from the Utilities Dept, words of mouth from Utilities and Engineering staff familiar with the field information, and the hard copy sewer map-books used by the staff. Hard copy sewer books were the main source of most of the feature attribute information. In-field verification using a GPS unit was done on 60% of the features and that was used in rubbersheeting for a more accurate spatial location representation of the manholes. All force mains and some lift stations were mapped using the scratch maps drawn by the Utilities Dept staff (those were not to scale). New line installations, repairs and updates of existing features is all field verified with a GPS before information is added. The system is a **work-in progress**.

 Locations are continually verified for positional accuracy and attribute data is visually inspected to detect any random errors. Feedbacks are welcome.

This data is provided with the understanding that the conclusions drawn from such information are solely the responsibilities of the user. The GIS data is not a legal representation of the features depicted, and any assumption of the legal status of this data is hereby disclaimed. Errors or omissions should be reported to the Panama City GIS 850-872-3064.

Arc Attribute Table Fields

Item Name	Length	Type
FACILITYID	20	C
PWTYPE	8	C
SUB_TYPE	4	C
SGMAIN_ID	10	C
RECORDED_LENGTH		FLOAT
DIAMETER	-	LI
MATERIAL	5	C
HEIGHT	-	LI
WIDTH	-	LI

Item Name	Length	Type
UPS_ELEV	-	FLOAT
DWN_ELEV	-	FLOAT
SLOPE	-	FLOAT
PARALLEL	4	C
OWNER	8	C
STATUS	8	C
LOCATION	100	C
DATE_INSTA		LI
ASBUILT_RE	50	C
WARRANTYDATE		DATE
LEGACYID	20	C
CONDITION	10	C
CONDITIONDATE	-	DATE
INSTALLDATE	-	DATE
DATEMODIFIED	-	DATE
DRAWINGNUMBER	255	C
ENGINEER	255	C
PROJECTNUMBER	255	C
SOURCE	255	C
CONTRACTOR	20	C
COMMENT	20	C
WORKREQUESTID	20	C
DESIGNID	20	C
WORKLOCATIONID	20	C
WORKFLOWSTATUS	-	LI
WORKFUNCTION	-	LI
WORKORDERID	20	C
SHAPE_LENGTH		D

Point Attribute Table Fields (for some fields not listed, see above LINE table list, has same field definition)

Item Name	Length	Type
IN MANHOLE FEATURE		
SECMH_ID	10	C
DOUBLEFLOW	10	C
STATION	14	C
ADDRESS	28	C
INV_ELEV_1	12	C
INV_ELEV_2	12	C
ELEV_TOP	-	D
ELEV_BOT	-	D
ELEV_INVER	-	D
MH_NOTES	30	C
PROJECT_DA	13	C
TREATMENTFACILITY	255	C
GROUNDSURFACETYPE	5	C
ACCESSDIAMETER		LI
ACCESSTYPE	5	C
ACCESSMATERIAL	5	C
WALLMATERIAL	5	C

ELEVATION	-	D
LENGTH	-	LI
WIDTH	-	LI
MANHOLEDEPTH	-	D

IN LIFTSTATION FEATURE

LIFTSTATIO	4	C
PUMP_	-	LI
MFG	12	C
TYPE	4	C
BUILDING	10	C
MODEL	14	C
HP	-	F
RPM	-	F
GPM	10	C
TDH	6	C
AMP	-	F
VOLT	-	F
ZONE_	-	SI
WWELL_SHAPE	-	C
WWELL_HEIGHT	-	F
WWELL_WIDTH	-	F
WWELL_LENGTH	-	F
WWELL_DIAMETER	-	F
PUMPON_HEIGHT	-	F
PUMPOFF_HEIGHT	-	F
WWELL_VOLUME	-	F

IN FITTING FEATURE

MATERIAL	5	C
JOINTTYPE	5	C

IN METER FEATURE

METERTYPE	5	C
FLOWRANGE	20	C
LASTCALIBRATEDATE		DATE

ARC ATTRIBUTES DEFINED.

FACILITY_ID
A user-defined feature identification used in Cityworks.

PWTYPE
This is a Cityworks code that specifies the system feature type:

FOR LINE FEATURES
SFMAIN   = sewer force main
SGMAIN   = sewer gravity main
SLATERAL   = sewer lateral line

FOR POINT FEATURES
SLIFTSTA   = sewer liftstation
SMANHOLE   = sewer manhole
SOUTFALL   = sewer outfall
SPIPEFIT   = sewer pipe fitting
SVALVE   =sewer valves
SMETER   =sewer meter
SOUTFALL   = sewer outfall

SUB_TYPE
Feature sub-type (exists in both line and point features)

SGMAIN_ID
Historic pipe identification

RECORDED_I
Recorded measurement of the line feature, figure from asbuilts.

DIAMETER
The inside diameter of the circular main pipe in inches: 0"-for unknown size, 3" to 24"

MATERIAL

FOR LINE FEATURES
Construction material of the pipe, i. e.

CIP   = cast iron pipe (CI)
COP   = copper
DIP   = duct iron pipe
GV   = galvanized
PVC   = polyvinyl chloride
VCP   = vetrified clay pipe
UK   = unknown
UNK   = unknown / not specified
null   = unknown / unspecified

FOR POINT FEATURES
The construction material of the valve, meter, or fitting (no coded values)

HEIGHT
The height of a non-circular main pipe (none used so far in sewer system)

WIDTH

FOR LINE FEATURES
The width of a non-circular main pipe (none used so far in sewer system)

FOR POINT FEATURES
The width of the interior section of the manhole

UPS_ELEV (manholes)
The upstream elevation of the end of pipe

DWN_ELEV (manholes)
The downstream elevation of the end of the pipe.

ELEV_TOP
Elevation of the top of the structure. In some cases an estimated ground elevation from the contour lines is filled in, in others, it is from the asbuilts.

ELEV_BOT
Bottom elevation of the structure. A figure from the asbuilts and in some cases computed based on the available fields.

WWELL_SHAPE (cylindrical or cubical)
The shape of the wet well in the liftstations

WWELL_HEIGHT
The height of the liftstation wet well

WWELL_WIDTH
The width of the wet well (cubical)

WWELL_LENGTH
The length of the wet well (cubical)

WWELL_DIAMETER
The diameter of the wet well (cylindrical)

PUMPON_HEIGHT
The height of the wet well at which the pump turns on.

PUMPOFF_HEIGHT
The height of the wet well at which the pump turns off.

WWELL_VOLUME
A computed figure at which the wet well will be at full capacity .

SLOPE
The slope of the pipe

PARALLEL
Is the pipe parrallel to other pipes i.e., Y = Yes, N = No

OWNER
The name of the city that maintains the feature i.e PC = Panama City
                                                     SF = Springfield
                                                     CG = Cedar Grove
                                                     CNTY = Unincorporated Bay County
                                                     PRVT=Private

STATUS
The present state of the feature i.e.,
                        ACT=Active
                        ABN=Abandoned
                        PRP=Proposed
                        NA=Not Active
                        UNC=Under Construction
                        DL=Dry Line
                        EMERG=Emergency
LOCATION
The approximate address location of the main or point feature

DATE_INSTA
This is the installation date for analysis purposes

ASBUILT_RE (this field will be removed and info will be transferred to DRAWINGNUMBER field)
Additional information recorded on the asbuilts or construction plans.

WARRANTYDATE
Date feature warranty will expire

LEGACYID
The unique historic identification of the feature.

CONDITION
Condition of the feature as seen in the field while field verifying i.e.
                                        NEW
                                        LEAKING
                                        EXPOSED etc,
Currently field is being used to identify all GPS verified features with field value of GPS

CONDITIONDATE
The date the feature condition was recorded/ this would be the same as GPS date.

INSTALLDATE
Date feature was installed or date on asbuilts

DATEMODIFIED
This is the date when feature was modified, could be the same as INSTALLDATE in some cases.

DRAWINGNUMBER
Information as seen on asbuilts or construction plans.

ENGINEER
The Engineering/Consulting company that designed the project

PROJECTNUMBER
Additional information relating to the project as seen on the asbuilts.

SOURCE
Place where information was gathered from, i.e   AS=Asbuilts
                                       UF/UM=Utility Files/Utility Maps
                                       EP=Engineering Plans
                                       LI=Located Information
                                       MBK=Map book

CONTRACTOR
The construction company that worked on the project.

COMMENT
More information related to the feature, can be good or bad.

WORKLOCATIONID

WORKFLOWSTATUS

WORKREQUESTID

DESIGNID

WORKFUNCTION

WORK ORDERID

POINT ATTRIBUTE FIELDS

SECMH-ID
The historical feature record identifier

DOUBLEFLOW-ID
Historical record identifier for features with double flow

STATION
The name of treatment plant service area in which it located i.e; St. Andrews or Millville

ADDRESS
Precise location of the Liftstation

INV_ELEV_
First invert elevation of 1st pipe in manhole where available

INV_ELEV_2
Second invert elevation of 2nd pipe in manhole where available

ELEV_TOP
Elevation of the rim of the manhole

ELEV_BOT
Elevation of the bottom of the manhole

ELEV_INVER
Invert elevation of the Manhole

MH_NOTES (field will be replaced with COMMENTS field)
Additional information about feature

PROJECT_DA
Date on which the construction project was completed

TREATMENTFACILITY (field will be removed and info put in the COMMENTS field)

GROUNDSURFACETYPE
The ground surface type where the feature is.

ACCESSDIAMETER
The diameater of the entrance point of the manhole

ACCESSTYPE
The type of access

ACCESSMATERIAL
The material of the access point of the manhole.

WALLMATERIAL
The kind of material of the structure

ELEVATION (field will be removed)

LENGTH (field same as MANHOLEDEPTH – and will be removed)

WIDTH (field same as ACCESSDIAMETER – and will be removed)

MANHOLEDEPTH
The length of the structure from top to bottom

LIFTSTATION#
Historical record identifier of the Liftstation

PUMP#
Number of pumps in the Liftstation

MFG
Pump manufacturer (field from liftstation database)

TYPE
Type of pump in the liftstation (field attribute is an abbreviated technical name of a pump)

BUILDING
Build of the pump in the Liftstation (field from liftstation database)

MODEL
Liftstation pump model (field from liftstation database)

HP
Pump **H**orse **P**ower in the Liftstation (field from liftstation database)

RPM
Revolutions **P**er **M**inute –a measure of the pump speed in the liftstation

GPM
Gallons **P**er **M**inute - Pumping capacity in the liftstation

TDH
Total **D**ynamic **H**ead -

 AMP
Amperage – power required to run the pump

VOLT
Voltage -

ZONE_
The number of the Liftstation service zone i.e; 1, 2 ,3 or 4

MATERIAL
The construction material of the feature, related objects, or part.

JOINTTYPE
The type of joint between pipe lengths or laterals, fittings, etc. i.e
<div style="margin-left:2em">

MJ = Mechanically Coupled Joint
PO = Push On
TH = Threaded
</div>

METERTYPE

FLOWRANGE

The range of flows for which the meter is accurate.

LASTCALIBRATEDATE

CODE

ENABLED